## Abstract

A laser system and method for self-injection locking. The system includes a laser having a laser output at a frequency  $\omega_o$ . An optical port provides a portion of the laser output at the port and a modulator, coupled to the port, is driven by a RF signal at a frequency  $\omega_m$  generates two sidebands at  $\omega_o \pm \omega_m$ . A filter passes one of the two sidebands; and an optical path couples an output of the filter to the laser for injection locking.